(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 29 September 2005 (29.09.2005)

PCT

(10) International Publication Number WO 2005/091121 A1

(51) International Patent Classification⁷: G06F 3/033

(21) International Application Number:

PCT/EP2005/002806

(22) International Filing Date: 16 March 2005 (16.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(**30**) Priority Data: 04006382.8

17 March 2004 (17.03.2004) EP

(71) Applicant (for all designated States except US): 3DConnexion GmbH [DE/DE]; An der Hartmühle 8, 82229 Seefeld (DE).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): PASCUCCI, Antonio [IT/DE]; Ulrich-Haid-Strasse 5, 82229 Seefeld (DE).
- (74) Agent: SCHMIDT, Steffen J.; Schweigerstrasse 2, 81541 München (DE).

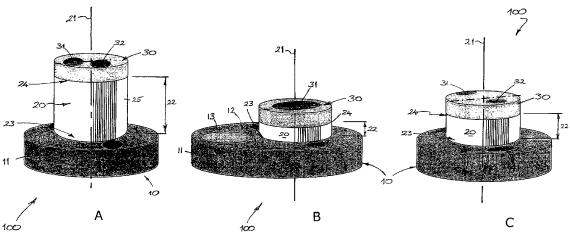
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: USER INTERFACE DEVICE



(57) **Abstract:** The present invention provides a device (100) for manual input of control signals in a computer-related environment, the device comprising: a base (10) for supporting the device on a surface; a first input member (20) mounted on the base (10) for rotary movement about an axis (21) extending generally upwardly from the base (10), the first input member (20) having an axial extent (22) from an end region (23) proximal the base (10) to an end region (23) distal from the base and enclosing a central space (26) within which a sensor arrangement (50) is housed for detecting and interpreting rotary movement of the first input member (20) relative to the base, the first input member (20) having an opening at each of its proximal and distal end regions (23, 24); and a pair of second input members (31, 32) provided at or adjacent said distal end region (24) of the first input member (20), each of said second input members (31, 32) comprising a switch or relay adapted to be actuated by application of finger pressure. Rotary movement of the first input member (20) and/or actuation of the second input members (31, 32) is adapted to generate a corresponding control signal within the computer environment.